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COUNTRY: Denmark

SUBJECT: Cavitation Research, Institute for Technical Physics

PLACE : [redacted] 25X1A6a

DATE ACQUIRED [redacted]

DATE OF INFO: 19 Sep 52 25X1X6

SOURCE: [redacted]

1. I talked with Professor R. E. Rasmussen who showed me the very interesting work he has been doing on errosion or surface damage by cavitation of water. Professor Rasmussen has a "water tunnel" which has a throat about 3 inches high by 12 to 15 inches wide with water velocities variable from low speeds up to 15 to 20 feet per second and with varying amounts of air mixed with the water. A cylindrical test object about 1/2" or 3/4" in diameter was placed across the throat of the tunnel as indicated. A glass cover permits watching the damage to the test specimen end-on as it progresses. I watched the test of a specimen of aluminum as the speed of water was increased from very slow speeds to the more rapid ones.. When no air is present in the water stream, the damage is high and takes place rapidly. When any appreciable amount of air is introduced with the water, the damage practically ceases.

2. The form of the pattern of errosion is interesting. All of the surface damage was done either at the ends of the specimen where the effect was greatest, or on the downstream side of the cylinder. The damage was done in vertical strips spaced evenly around the half cylinder. The studies indicated have been carried out on aluminum, brass and plexiglass-- the effects are not the same on the plexiglass as on the metals. I have been promised reprints of any publications on this work.

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